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Mr. John Towns
National Center for Supercomputing Applications
University of Illinois at Urbana-Champaign
Campus Mail Code: MC-257
1205 W. Clark St., Room 1008
Urbana, IL 61801

Dear John,

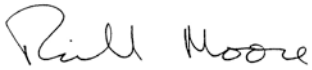
The San Diego Supercomputer Center (SDSC) wishes to participate in the XSEDE Federation and SP Forum as a Level 1 Service Provider (SP) through its delivery of the Trestles high-performance computing resource, funded by the National Science Foundation under award OCI-0503944.

Trestles is a high-performance compute cluster designed by Appro and SDSC consisting of 324 compute nodes. Each compute node contains four sockets, each with an 8-core 2.4 GHz AMD Magny-Cours processor, for a total of 32 cores per node and 10,368 total cores for the system. Each node has 64 GB of DDR3 RAM, with a theoretical memory bandwidth of 171 GB/s. The compute nodes are connected via QDR InfiniBand interconnect, fat tree topology, with each link capable of 8 GB/s (bidirectional). Trestles has a theoretical peak performance of 100 TFlop/s. Trestles currently mounts two high-bandwidth Lustre parallel file systems: a scratch system of ~400TB (usable) with ~10GB/s bandwidth and ~400TB (usable) 'project storage' with comparable bandwidth, which is co-mounted with Gordon and used for longer-term, allocated storage.

There are significant benefits of having Trestles as a Level 1 Service Provider within the XSEDE Federation. Trestles is specifically targeted to serve modest-scale and gateway users in an environment that facilitates the productivity of this vital segment of the user community. Previous analyses of TG/XSEDE usage have demonstrated an "80/20" rule where ~80% of TG/XSEDE projects run jobs no more than ~512 cores and these modest-scale jobs consume ~20% of overall CPU resources. Gateways are also emerging as a major mechanism for many scientists, especially new users, to access XSEDE resources. For example, the CIPRES gateway alone accounts for ~25% of all XSEDE users. And it is clear that these modest-scale and gateway users are having a major scientific impact, as demonstrated by publications and citation records. Thus it is crucial that the repertoire of resources within XSEDE include systems such as Trestles that cater to this segment of the user community.

We have reviewed the *XD Service Providers Forum: Charter, Membership, and Governance* document (version 10.1, dated 2 February 2012, at: https://www.xsede.org/documents/10157/281380/SPF_Definition_v10.1_120228.pdf3) defining the mutual responsibilities of XSEDE and an SP, and are confident that we can and will fulfill our obligations as described therein. In the event that you have an issue with our performance, please contact me directly. Similarly, if we perceive an issue, we will contact you. In either case we commit to work together to resolve any issues. We at SDSC look forward to working with XSEDE to advance the mission of XSEDE and the NSF in advancing the nation's research capability.

Sincerely,



Dr. Richard Moore